



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Northwest Region
7600 Sand Point Way N.E., Bldg. 1
Seattle, WA 98115

Refer to:

OSB1998-0031

August 20, 1998

W.B. Paynter
U.S. Army Corps of Engineers
Portland District, CENWP-CO-GP
P.O. Box 2946
Portland, OR 97208-2946

Re: Consultation on Medford sewage treatment plant construction (COE 98-356), Jackson County, Oregon

Dear Mr. Paynter:

This concludes our correspondence regarding the effects on Southern Oregon/Northern California coho salmon (SONC coho) and Southern Oregon/Coastal California chinook salmon (SOCC chinook) of issuance of a Section 404(b)(1) permit (COE 98-356) to construct a new outfall diffuser for the Medford Regional Water Reclamation Facility (Facility) on the Rogue River. The Facility is located near White City, Jackson County, Oregon, on the Rogue River at River Mile 131. The permit applicant is the City of Medford (City), which proposes to replace the existing outfall in the summer of 1999.

The SONC coho has been listed as threatened under the Endangered Species Act (ESA) by the National Marine Fisheries Service (NMFS) (May 6, 1997, 62 FR 42588). Critical habitat for SONC coho was proposed by the NMFS on November 25, 1997 (62 FR 62741). The Southern Oregon/Coastal California (SOCC) chinook salmon, was proposed for listing under the ESA on March 9, 1998 (63 FR 11482), with a final listing decision in March 1999; critical habitat for the SOCC chinook was proposed at the same time as the proposed listing. Both SONC coho and SOCC chinook salmon occur in the Rogue River. This consultation is undertaken under section 7(a)(2) of the ESA, and its implementing regulations, 50 CFR Part 402.

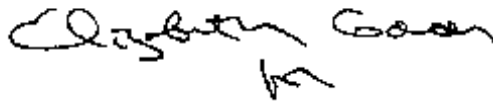
In a letter dated April 20, 1998, you requested informal consultation on the effect of the application of the City to construct a diffuser outfall for the Facility on SONC coho salmon; you had distributed a Nationwide Permit Pre-construction Notification for the outfall project on April 15, 1998. In a letter dated May 1, 1998, we responded to your Pre-Construction Notification, pursuant to the Fish and Wildlife Coordination Act, and to the COE's request for informal consultation, under the ESA. Specific to the ESA, we stated that we could not concur, at that time, with the COE's "not likely to adversely affect" conclusion for issuance of the 404 permit,



because the description of the project was not complete enough to make that determination. Based on an expanded description of the project by the City and its engineering consultant, and the likelihood that some SONC individuals are likely to occur during the Oregon Department of Fish and Wildlife's in-water work period, NMFS staff confirmed with COE staff on June 16, 1998 that formal consultation on the City's permit would be necessary. At that time, COE staff also requested conferencing on the effects of the permit on the SOCC chinook salmon.

Enclosed is the Biological Opinion (BO) on your issuance of 404(b)(1) permit to the City, authorizing the incidental take of SONC coho that may be caused by this action, provided that the terms and conditions of the incidental take statement are met. Please note that the BO does not analyze the effects of the use of in-water explosives; the proposed use of this technique will require reinitiation of consultation. If you have any questions regarding this opinion, please contact Dan Kenney, Fishery Biologist at (541) 957-3385.

Sincerely,

A handwritten signature in black ink, appearing to read "William Stelle, Jr.", with a stylized flourish underneath.

William Stelle, Jr.
Regional Administrator

cc: Mike McCabe, Oregon Division of State Lands
Mike Evenson, Oregon Department of Fish and Wildlife
Steve Wille, U.S. Fish and Wildlife Service
Larry Blanchard, City of Medford

Endangered Species Act - Section 7
Consultation

BIOLOGICAL OPINION

Effects of Construction of the Medford Regional Water
Reclamation Facility Rogue River Outfall Diffuser (COE 98-
356) on Southern Oregon/Northern California Coho Salmon and
Southern Oregon/Coastal California Chinook Salmon

Agency: Portland District, U.S. Army Corps of Engineers

Consultation Conducted By: National Marine Fisheries
Service, Northwest Region

Date Issued: August 20, 1998

Refer to: OSB1998-0031

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ATTACHMENT 1	BIOLOGICAL REQUIREMENTS AND STATUS UNDER 1996 ENVIRONMENTAL BASELINE: UMPQUA RIVER CUTTHROAT TROUT, OREGON COAST COHO SALMON, OREGON COAST STEELHEAD, SOUTHERN OREGON/NORTHERN CALIFORNIA COHO SALMON, KLAMATH MOUNTAIN PROVINCE STEELHEAD, LOWER COLUMBIA STEELHEAD, AND CHUM SALMON
ATTACHMENT 2	APPLICATION OF ENDANGERED SPECIES ACT STANDARDS TO: UMPQUA RIVER CUTTHROAT TROUT, OREGON COAST COHO SALMON, SOUTHERN OREGON/NORTHERN CALIFORNIA COHO SALMON, OREGON COAST STEELHEAD, KLAMATH MOUNTAIN PROVINCE STEELHEAD, LOWER COLUMBIA STEELHEAD, CHUM SALMON, CHINOOK SALMON, AND SEA-RUN CUTTHROAT TROUT
ATTACHMENT 3	ODOT General Minimization/Avoidance Measures

I. Background

The Southern Oregon/Northern California (SONC) coho salmon (*Oncorhynchus kisutch*) has been listed as threatened under the Endangered Species Act (ESA) by the National Marine Fisheries Service (NMFS) (May 6, 1997, 62 FR 42588). Critical habitat for SONC coho was proposed by the NMFS on November 25, 1997 (62 FR 62741). The Southern Oregon/Coastal California (SOCC) chinook salmon (*Oncorhynchus tshawytscha*) was proposed for listing under the ESA on March 9, 1998 (63 FR 11482), with a final listing decision expected in March 1999; critical habitat for the SOCC chinook was proposed at the same time as the proposed listing. Both SONC coho and SOCC chinook salmon occur in the Rogue River.

In a letter dated April 20, 1998, the Portland District of the U.S. Army Corps of Engineers (COE) requested informal consultation on the effect of the application (COE ID #98-356) of the City of Medford (City) to construct a diffuser outfall for its Regional Water Reclamation Facility (Facility), on SONC coho salmon. The Facility is located near White City, Jackson County, Oregon, on the Rogue River at River Mile 131. The COE had also distributed a Nationwide Permit Pre-construction Notification for the outfall project, dated April 15, 1998, which described the proposed action. The City submitted the application under Section 404(b)(1) of the Clean Water Act, which the COE administers.

The Facility currently discharges treated sewage effluent into the Rogue River from a single outfall pipe located on the shoreline; the effluent flows into the river onto or slightly under the water's surface. The City proposes to replace the existing outfall with a multiport diffuser which would more efficiently mix the effluent with river water, improving site water quality. The three diffusers would emerge from the river bottom, so their construction would require that a trench be excavated into the river bottom to bury the outfall pipe. The city proposes to excavate the trench using heavy equipment or explosives.

In a letter dated May 1, 1998, the NMFS responded to the COE's Pre-Construction Notification, pursuant to the Fish and Wildlife Coordination Act, and to the COE's request for informal consultation under the ESA. Specific to the ESA, the NMFS stated that it could not concur, at that time, with the COE's "not likely to adversely affect" conclusion for issuance of the 404(b)(1) permit, because the description of the project was not complete enough to make that determination.

In a subsequent communication to the NMFS and the City, the City's engineering consultant (May 26, 1998 facsimile transmission from West Yost & Associates) described the likely construction methods for the project. Based on this description, and the likelihood that some SONC individuals are likely to occur during the Oregon Department of Fish and Wildlife's in-water work period, NMFS staff confirmed with COE staff (Personal communication, June 16, 1998, Dan Kenney, NMFS, with Bill Davis, COE) that formal consultation on the City's 404(b)(1) permit would be necessary. At that time, the COE also requested conferencing on the effects of the permit on the SOCC chinook salmon.

The objective of this biological opinion is to determine whether the construction of the Facility's outfall diffuser is likely to jeopardize SONC coho salmon, listed as threatened under the ESA, or SOCC chinook salmon, proposed as threatened under the ESA, or result in destruction or adverse modification of proposed critical habitat for either of these species. Although NMFS expects some effects to individual fish and their habitat from these actions, the effects to SONC coho and SOCC chinook essential habitat are expected to be minor because of project design, and adverse effects to individual SONC coho or SOCC chinook are expected to be rare.

II. Proposed Action

The "proposed action" is issuance of an individual permit under Section 404(b)(1) of the Clean Water Act. The permit would allow the City to replace its existing Facility outfall with a multiport diffuser (approximately 40 feet upstream) to discharge effluent near the bottom of the river and 10 to 30 feet from the low-water shoreline. The City believes that the multiport diffuser would improve site water quality and aesthetics, primarily through more efficient and less visible mixing of the effluent with the river water.

The construction of the multiport diffuser would involve excavation of a trench through the bank of the Rogue River and approximately 30 feet into the river (at low flow). Excavation of the trench would require the mechanical and/or explosive removal of approximately 5 to 10 vertical feet of loose riverbed material and 5 vertical feet of bedrock. The trench would be approximately 8 feet in width at the bottom and somewhat wider at the top (due to slumping of riverbed material). The City's engineering consultant estimates that construction of the new outfall pipe would be performed using a ramp and in-river platform. The City's construction contractor would likely excavate a ramp down to the river bank from the adjacent terrace. The ramp would allow the contractor's equipment to access the water's edge, and to excavate the outfall pipe trench to the extent of the equipment's reach and ability. To excavate the entire 30-foot in-water length of the trench, however, it is likely that the contractor will need to construct a sheetpile platform or caisson in the river.

The platform would likely be constructed of sheet piling that would be driven to refusal (likely to bedrock) beginning about 15 to 20 feet from the river's edge, at the end of the ramp. The pairs of sheet piling would be driven parallel to each other 10 to 12 feet apart, then spot-welded together and braced with I-beams, and finally filled with clean gravel from an off-site source. The platform would extend 20 to 25 feet into the river, and would be constructed just upstream of the outfall trench site, so that an hydraulic hoe or excavator could sit about 4 feet above the water's surface and excavate the trench from the gravel and cobble riverbed. The applicant believes that the bedrock, which is weathered (but hard) mudstone, may also possibly be excavated with the hydraulic excavator equipped with a ripper or hammer. Alternately, explosives may need to be used to first fracture the bedrock to

allow excavation with the hoe, however, this consultation does not consider the potential effects of the in-water use of explosives; reinitiation of consultation will be necessary if it is determined that explosives should be employed.

After the trench has been completely excavated in the river, about a foot of clean bedding gravel would be placed in the trench, and the outfall pipe with the three diffusers would be floated into place sunk atop the bedding. The trench would then be backfilled with more clean gravel and then riprap would be placed atop the backfill to protect the pipe from erosion. Finally, native riverbed material would be used to fill the trench level with the riverbed. The City's consultant estimates that construction of the ramp and in-river platform would take up to two weeks, the in-water excavation would last approximately one week, the bedding and pipe would be placed in one day, backfill of the trench would take about a week, and removal of the platform and reshaping of the riverbank could likely be completed in a few days.

In-water excavation is proposed for the Oregon Department of Fish and Wildlife's June 15-August 31 work window for this portion of the Rogue River. Riparian vegetation would be removed from the river bank and riparian area during construction, but the applicant proposes to replace the vegetation with plantings of native shrubs and trees.

III. Biological Information and Critical Habitat

The listing status, biological information, and critical habitat elements for SONC coho are described in Attachment 1 (NMFS [1997b], see Table of Contents for full title), Weitkamp et al. (1995), and the final listing rule (62 FR 24588). Similar information can be found on SOCC chinook salmon in Myers et al. (1998) and the proposed listing rule (63 FR 11482). Some site-specific information is provided below. As noted above, critical habitat has been proposed for both SONC coho and SOCC chinook, and the attachment describes potential critical habitat elements for these species.

The Rogue River supports populations of SONC coho, spring- and fall-run SOCC chinook, as well as summer- and winter-run Klamath Mountain Province steelhead. Flows and water temperatures in much of the Rogue River are substantially influenced by Lost Creek Dam, a Corps of Engineers flood control project located at River Mile 158. Although the effect of dam operations wanes as tributaries contribute to river flow, cool water releases maintain river temperatures low enough to support salmonids year-around in the vicinity of the Facility (Personal communication, T.D. Satterthwaite, Oregon Department of Fish and Wildlife [ODFW], June 19, 1998). Summer water temperatures in many Rogue River tributaries and in parts of the mainstem are higher than desired and are likely a limiting factor for most, if not all, salmonid species in the Rogue basin (Prevost et al. 1997).

Individuals of all of the anadromous salmonid runs listed above are known to occur in the Rogue River in the vicinity of the Facility at some time of the year. Adult SONC coho pass through the area during

the fall and early winter, on the way to spawning areas in upper Rogue River tributaries such as Elk Creek, Trail Creek, and Little Butte Creek. SONC coho smolts also pass through the area on their outmigration to the Pacific Ocean, typically from mid-April through mid-July. (ODFW 1991). In addition, some young-of-the-year coho salmon are likely to inhabit the upper mainstem of the Rogue (down to about Gold Ray Dam) throughout the year (Personal communication, T.D. Satterthwaite, ODFW, June 19, 1998).

Individual SOCC chinook are also like to occur in the Rogue River in the vicinity of the facility during most or all of the year. Fall chinook salmon spawn throughout most of the Rogue River mainstem, while spring chinook salmon spawn only in the upper Rogue River above Gold Ray Dam (ODFW 1992). The SOCC chinook that spawn in the vicinity of the Facility can be described as late spring-run or early fall-run, and would be present throughout the summer, although spawning typically does not begin until early October (Personal communication, T.D. Satterthwaite, ODFW, June 19, 1998). Chinook salmon in the Rogue River typically complete emergence from redds by late April, and outmigrate to the ocean as subyearlings, generally beginning in early July, and extending through August (ODFW 1992).

IV. Evaluating Proposed Actions

The standards for determining jeopardy are set forth in Section 7(a)(2) of the ESA as defined by the consultation regulations (50 C.F.R. Part 402). Attachment 2 (NMFS [1997a], see Table of Contents for full title) describes how NMFS applies the ESA jeopardy and destruction/adverse modification of critical habitat standards to consultations for Federal land management actions in the Rogue River basin.

As described in Attachment 2, the first steps in applying the ESA jeopardy standards are to define the biological requirements of listed or proposed species and to describe the species' current status as reflected by the environmental baseline. In the next steps, NMFS' jeopardy analysis often considers how proposed actions are expected to directly and indirectly affect specific environmental factors that define properly functioning aquatic habitat essential for the survival and recovery of the species. This type of analysis is set within the dual context of the species' biological requirements and the existing conditions under the environmental baseline (defined in Attachment 1). Such an analysis takes into consideration an overall picture of the beneficial and detrimental activities taking place within the action area. In this proposed action, however, NMFS has determined that potential effects of the action on environmental factors are a less likely cause of harm to the listed species than direct physical injury. If direct physical injury or mortality to individuals of these species or the net effect on the environmental baseline of the proposed activity is found to jeopardize the listed species, then NMFS must identify any reasonable and prudent alternatives to the proposed action.

A. Biological Requirements

For this consultation, NMFS finds that the biological requirements of SONC coho and SOCC chinook are best expressed in terms of current population status. This information is summarized in Attachment 1. As discussed in III., above, SONC coho and SONC chinook use the subject portion of the Rogue River as a migration corridor, as juvenile rearing habitat, and as (chinook) adult holding, spawning and incubation habitat. Therefore, the environmental factors that define properly functioning migration, rearing, spawning, and incubation habitat are necessary for survival and recovery of the species. Individual environmental factors include water quality, habitat access, physical habitat elements, channel condition, and hydrology. Although it is not relevant to this action, properly functioning watersheds, where all of the individual factors operate together to provide healthy aquatic ecosystems, are also necessary for the survival and recovery of the listed/proposed species. This information is also summarized in Attachment 1.

B. Environmental Baseline

Current range-wide status of SONC coho and SOCC chinook under environmental baseline. NMFS described the current population status of the SONC coho and SOCC chinook in their status reviews (Weitkamp et al. 1995; and Myers, et al. 1998, respectively), and in the SONC coho final rule (62 FR 24588) and the SOCC chinook proposed rule (63 FR 11482). Critical habitat for SONC coho was proposed by the NMFS on November 25, 1997 (62 FR 62741), while critical habitat for SOCC chinook was proposed simultaneously with the proposed listing. The recent range-wide status of this species is summarized in Attachment 1.

Current status of SONC coho and SOCC chinook under environmental baseline within the action area. The “action area” is defined as “all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action” (50 CFR 402.02). The general action area can be defined as the mainstem Rogue River from just upstream of the construction site at River Mile 131 to a few hundred yards below the construction site.

As noted above, SONC coho and SOCC chinook use the action area as a migration corridor and (particularly for chinook salmon) as a rearing and feeding area. Spawning by spring/fall chinook salmon is also known to occur in the action area. The major factor influencing salmonid habitat in the action area appears to be the operation of Lost Creek Dam, which has altered the hydrograph and temperature of the Rogue River. The operation of the dam is likely to have only minor, but possibly positive, effects on SONC coho in the action area, primarily through improved rearing conditions for juveniles. Operation of the dam is believed to have had a substantial positive effect on fall chinook populations in the Rogue River, because of lower summer and higher winter water temperatures, and reduced peak winter flows (ODFW 1992), but likely at the expense of the naturally produced spring chinook salmon population (Personal communication, T.D. Satterthwaite, ODFW, June 19, 1998). In any event, the proposed action would not affect water temperature or volume in the action area.

Although the environmental baseline of the upper Rogue River basin, based on Federal land management agency consultations, is dominated by conditions rated largely as “at risk” or “not properly functioning”, the proposed action is unlikely to further degrade habitat conditions in the action area in the long-term. The degraded habitat conditions in the basin are mostly the result widespread agricultural and urban development, as well as upstream forest management practices, so the short-term increases in turbidity.

Based on the best information available on the current status of SONC coho and SOCC chinook (Attachment 1), NMFS assumptions given the information available regarding population status, population trends, and genetics (see Attachment 2), and the relatively poor environmental baseline conditions within the action area (see the SONC coho final listing rule and SOCC chinook proposed listing rule), NMFS concludes that not all of the biological requirements of the species within the action area are currently being met under the environmental baseline. Actions that do not retard attainment of properly functioning aquatic conditions, when added to the environmental baseline, are necessary to meet the needs of the species for survival and recovery.

V. Analysis of Effects

A. Effects of Proposed Action

The effects determination in many Opinions is made using a method for evaluating current aquatic conditions (the environmental baseline) and predicting effects of actions on them. While the full process is not appropriate in the current Opinion, because the subject action is unlikely to substantially adversely affect the environmental baseline, this process is described in the document “Making ESA Determinations of Effect for Individual or Grouped Actions at the Watershed Scale” (NMFS 1996). This assessment method was designed for the purpose of providing adequate information in a tabular form for NMFS to determine the effects of actions subject to consultation. The effects of actions are expressed in terms of the expected effect (restore, maintain, or degrade) on aquatic habitat factors in the project area.

The results of a completed checklist for a proposed action provides a basis for determining the overall effects on the environmental baseline in the action area. Effects to the environmental baseline from this action are expected to be insignificant (all aquatic habitat factors will be maintained) because of project design.

The principal potential effects of the proposed construction to SONC coho and SOCC chinook and their critical habitat are related to the excavation of stream substrate and bedrock, and the construction

and removal of an in-water platform for the excavation. In addition, the possible introduction of toxic substances into the river, disturbance of the river bank and its vegetation, and operation of the multiport diffuser also have the potential to adversely affect SONC coho, SOCC chinook, and their proposed critical habitat.

i. In-water excavation and platform construction/removal. These activities chiefly have the potential to indirectly affect SONC coho and SOCC chinook through impacts to habitat (including primary and secondary productivity), while some direct effects of these activities to individual salmon are also possible. Principally, these activities would create turbidity (suspended sediments) in the Rogue River from fine sediments in the materials that would be placed, removed, or excavated. Most of the larger suspended sediment particles would deposit in the Rogue River a short distance downstream of the platform/trench site. In addition to sediment and turbidity, sheet pile driving and bedrock excavation is likely to create considerable noise, which may frighten individual salmon. Also, the equipment used for these activities may come into direct contact with individual salmon.

Turbidity, at moderate levels, has the potential to adversely affect primary and secondary productivity, and at high levels, has the potential to injure and kill adult and juvenile fish, and may also interfere with feeding (Spence et al. 1996). Newly emerged salmonid fry may be vulnerable to even moderate amounts of turbidity (Bjornn and Reiser 1991). Fine redeposited sediments also have the potential to adversely affect primary and secondary productivity (Spence et al. 1996), and to reduce incubation success (Bell 1991) and cover for juvenile salmonids (Bjornn and Reiser 1991).

Primary and secondary production would not likely be substantially affected by the proposed action because of the relatively small amount and short duration of turbidity produced by the construction and removal of the platform and excavation of the trench. In addition, the relatively high volume and velocity of Rogue River flow should substantially dilute the turbidity produced. Clean river rock (from off-site) would be used to fill the platform, and the material excavated from the trench should be relatively low in fine sediment (the site is a swift run, so little deposited silt should be present, and fractured bedrock should also not produce much in the way of fines). Similarly, because the source of deposited sediment would result from suspended sediment (turbidity), its effect should also be minor.

Although turbidity has some potential to directly adversely affect fish, this usually occurs in situations where no relief from the turbidity is possible. In the Rogue River, any juvenile SONC coho and SOCC chinook present during the proposed activities would have the opportunity to move out of the minor and short-term turbidity plumes created by the proposed action (incubation for SOCC is complete by late April), so no direct adverse effect is likely. Also, indirect effects of turbidity on juvenile salmon, such as a reduction in prey availability, seem unlikely due to the small scale of the action's effect on benthic invertebrates. Deposited sediments should have a similar negligible effect on SONC coho, because no spawning of this species is likely to occur in the Rogue River. Although SOCC chinook spawn in this reach of the Rogue River, the likely small scale and short duration of sediment deposition associated with the proposed actions, as well as the replacement of native substrate removed for trench

excavation, would mean that effects on chinook spawning and incubation habitat should be negligible. Direct effects on chinook salmon spawning should not occur, because chinook should not begin spawning until October, and in-water work would not occur after September 21.

As noted above, it is likely that subyearling SONC coho and juvenile and adult SOCC chinook salmon would be present in the subject reach of the Rogue River during the proposed in-water work period. Salmon present in the area of the excavation have the potential to be directly affected by the contractor's use of heavy equipment during construction and removal of the work platform and trench excavation through capture, crushing or disturbance.

It is possible that individual juvenile SONC coho and SOCC chinook in close proximity to the platform/trench sites might, in the process of fill/excavation, come in contact with the equipment when it is used in the river. Fish in the path of a bucket or ripper could be crushed by the movement of fill or excavated material at the site, or captured within a bucket and dumped in a truck. Either of these scenarios would likely cause injury or death to the affected fish. Noise, light, vibration, etc. from the operation may also disturb adult and juvenile salmon, causing individuals to avoid the immediate excavation area. Finally, similar direct effects to other Rogue River organisms, such as benthic invertebrates and several species of fish, may occur due to contact with an excavator bucket or other equipment.

While the possibility exists that direct physical harm could occur to SONC coho or SOCC chinook due to the use of the contractor's equipment, it seems likely that such injuries would be rare. This is because these fish are both wary of potential danger and have substantial swimming ability (for example, in the lower Applegate River [a major Rogue River tributary], subyearling coho and chinook would be a minimum of about 70 mm and 100 mm in length, respectively, by July [Personal communication, C.A. Fustish, ODFW, May 29, 1998]. That is, the noise, movement, etc. from the equipment are likely to be easily detectable by salmon from a sufficient distance to allow the fish to avoid the area of danger. While the noise, etc. generated by the proposed operation has the potential to disturb fish in the river, the zone of significant disturbance would be small compared to the remainder of that reach of the Rogue River, and so should not adversely affect individuals of the species.

Less mobile forms of salmon, such as eggs and fry, should not occur in the Rogue River during the in-water work period, and would not be affected by the proposed action. Injury and mortality to benthic invertebrates, as well as eggs and larvae of other fish species, may occur because of the proposed activities, but based on reasoning similar to that advanced above for the indirect effects of turbidity and sedimentation, it is likely that the indirect effects on SONC coho and SOCC chinook would be minimal.

Attachment 3 (ODOT [undated], ODOT General Minimization/Avoidance Measures) lists general minimization and avoidance measures regarding in-water work, erosion control, hazardous materials, riparian impacts, and monitoring. These measures are used by the Oregon Department of Transportation, but are directly applicable to the proposal here addressed. Sediment inputs are likely

to result from the proposed action due to in-water work, but are expected to be temporary and localized. State regulations require that turbidity not exceed 10 percent above background from more than two hours. A number of measures would be implemented to reduce sedimentation (see Attachment 3). All control devices would be inspected daily during periods of precipitation and weekly during dry periods.

ii. Toxic contamination. Operation of excavators, trucks, piledrivers, etc., requires the use of fuel, lubricants, etc., which, if spilled into the Rogue River, could injure or kill aquatic organisms. However, the City's contractor will be required to perform all refueling of heavy equipment outside of the river channel. Also, the COE requires, as a condition of the proposed permit, that the City take care to prevent any petroleum products, chemicals, or other deleterious materials from entering the water. Assuming that the City meets these conditions, it is unlikely that a substantial spill will occur. Even if a spill of a toxic material were to occur, it is likely that the volume of flow in the Rogue River would quickly dilute the substance to a non-lethal level for SONC coho and SOCC chinook that might be in the vicinity.

iii. Riparian zone. Short-term adverse effects on the streambank condition and riparian function may occur due to the trench excavation and construction of a ramp to the river's edge. Between the trench and the ramp, perhaps 25 to 40 feet of riverbank would be disturbed, but there is currently little woody vegetation present on the nearly vertical bank. The City would use appropriate native plants to revegetate all of the disturbed area, and would regrade the bank to a shallower angle; these actions should ensure that long-term adverse effects do not occur. Adverse effects on streambank conditions should be confined to the in-stream work period when the ramp is in place. In addition, the required plantings should quickly replace or exceed existing vegetation that may be removed.

iv. Attraction to diffuser. High-volume underwater outfalls and discharges have been known to attract adult anadromous salmonids, and in some cases, to cause injury or death when the fish enter and are sometimes trapped in pipes or draft tubes. In the subject proposal, the exit velocity and dimensions of the diffusers (about 9 feet per second through a 5.5 by 24-inch opening) should preclude the potential for adverse effects. This velocity is thought to be high enough to discourage entrance, and the size of each diffuser should be small enough to be unattractive. In addition, the quality and temperature of the effluent should be different enough from Rogue River water so that the outfall is easily distinguishable.

B. Effects of Interrelated and Interdependent Actions. Interrelated and interdependent actions are those that would not occur but for the proposed action. The multiport effluent diffuser would replace an existing effluent pipe. Effluent from the Facility would still be discharged to the Rogue River whether the proposed action is completed or not, but the diffuser will likely improve water quality in the action area, if not in the Rogue River as a whole. The proposed diffuser would not increase the volume of effluent that could be discharged to the river. Thus, the proposed action will not result in actions that would not otherwise occur.

C. Cumulative Effects. Cumulative effects are defined in 50 CFR 402.02 as "those effects of future State or private activities, not involving Federal activities, that are reasonably certain to occur within the action area of the Federal action subject to consultation." The "action area" for this consultation is the mainstem Rogue River from just upstream of the construction site at River Mile 131 to a few hundred yards below the construction site. Future Federal actions, including land management activities, are being (or have been) reviewed through separate section 7 consultation processes. In addition, non-Federal actions that require authorization under section 10 of the ESA will be evaluated in section 7 consultations. Therefore, these actions are not considered cumulative to the proposed action. NMFS is not aware of any future new (or changes to existing) State and private activities within the action area that would cause greater impacts to listed species than presently occurs. NMFS assumes that future private and State actions will continue at similar intensities as in recent years.

VI. Conclusion

NMFS has determined that, based on the available information, permitting of the City's construction of a multipoint effluent diffuser under Section 404(b)(1) of the Clean Water Act, is not likely to jeopardize the continued existence of SONC coho salmon or SOCC chinook, or result in the destruction or adverse modification of proposed critical habitat for these species. NMFS used the best available scientific and commercial data to apply its jeopardy analysis (described in Attachment 2), when analyzing the effects of the proposed action on the biological requirements of the species relative to the environmental baseline (described in Attachment 1), together with cumulative effects.

In reaching this conclusion, NMFS determined that the survival and recovery of SONC coho and SOCC chinook would not be appreciably diminished by the proposed action. This conclusion was reached primarily because: 1) the proposed action would likely cause minor, short-term decreases in water quality, but the effects on the essential features of salmon habitat are expected to be negligible; 2) riparian plantings over the disturbed areas should quickly replace the small amount of riparian vegetation lost during construction; 3) direct disturbance of SONC coho and SOCC chinook due to noise, etc. would be minimal, due to the small area of the aggregate excavation operation compared to the remainder of the lower Applegate River; 4) direct mortality from entrainment in the excavator bucket, etc. should be rare because most individual coho and chinook salmon coming into proximity of the dredge should be aware and agile enough to avoid injury.

VII. Reinitiation of Consultation

Consultation must be reinitiated if: the amount or extent of taking specified in the Incidental Take Statement is exceeded, or is expected to be exceeded; new information reveals effects of the action may affect listed species in a way not previously considered; the action is modified in a way that causes an effect on listed species that was not previously considered; or, a new species is listed or critical

habitat is designated that may be affected by the action (50 CFR 402.16). In particular, the effects of explosive excavation have not been considered in this opinion. If the City determines that the use of explosives for excavating the in-water trench are necessary, then the COE must reinitiate consultation.

VIII. References

Section 7(a)(2) of the ESA requires biological opinions to be based on "the best scientific and commercial data available." This section identifies the data used in developing this opinion, in addition to the BA.

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IX. Incidental Take Statement

Sections 4 (d) and 9 of the ESA prohibit any taking (harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such conduct) of listed species without a specific permit or exemption. Harm is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns such as breeding, feeding, and sheltering. Harass is defined as actions that create the likelihood of injuring listed species to such an extent as to significantly alter normal behavior patterns which include, but are not limited to, breeding, feeding, and sheltering. Incidental take is take of listed animal species that results from, but is not the purpose of, the Federal agency or the applicant carrying out an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to, and not intended as part of, the agency action is not considered prohibited taking provided that such taking is in compliance with the terms and conditions of this incidental take statement.

An incidental take statement specifies the impact of any incidental taking of endangered or threatened species. It also provides reasonable and prudent measures that are necessary to minimize impacts and sets forth terms and conditions with which the action agency must comply in order to implement the reasonable and prudent measures.

A. Amount or Extent of the Take

The NMFS anticipates that the action covered by this Biological Opinion (construction of the multiport diffuser effluent outfall) has more than a negligible likelihood of resulting in incidental take of SONC coho and SOCC chinook because of short-term increases in sediment levels and the potential for direct incidental take during in-water work (especially platform construction and trench excavation). Effects of actions such as these are largely unquantifiable in the short term, and are not expected to be measurable as long-term effects on the species' habitat or population levels. Therefore, even though NMFS expects some low level incidental take to occur due to the actions covered by this Biological Opinion, the best scientific and commercial data available are not sufficient to enable NMFS to estimate a specific amount of incidental take to the species itself. In instances such as these, the NMFS designates the expected level of take as "unquantifiable." Based on information provided by the COE and the City, as well as other information, NMFS anticipates that an unquantifiable amount of incidental take could occur as a result of the actions covered by this Biological Opinion.

B. Reasonable and Prudent Measures

The NMFS believes that the following reasonable and prudent measures are necessary and appropriate to minimize the take of SONC coho and SOCC chinook.

1. The COE shall ensure that the City shall minimize the potential for direct incidental take of SONC coho and SOCC chinook due to the use heavy equipment to construct the trench and platform, including turbidity, sedimentation, and erosion.

C. Terms and Conditions

In order to be exempt from the prohibitions of section 9 of the ESA, the COE must comply with the following terms and conditions, which implement the reasonable and prudent measures described above. These terms and conditions are non-discretionary.

1. Minimization/avoidance measures listed in Attachment 3 for in-water work, erosion control, hazardous materials, riparian impacts, and monitoring shall be implemented for the proposed action in accordance with the terms and objectives of Attachment 3. Although Attachment 3 specifically deals with road-construction and maintenance activities of the Oregon Department of Transportation, the measures, terms, and objectives are directly applicable to the proposed action.
2. All work within the active flowing channel (in-water work) shall occur between June 15 and September 21.
3. Replace and maintain riparian vegetation at the project site with native species to the maximum extent horticulturally possible.